

"FIRE-IMMUNITY": PSI ABILITY OR PSYCHOPHYSIOLOGICAL PHENOMENON

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Anthropologists and ethnographers in the course of their field research have often observed the phenomena of "fire-immunity" among participants of magical and religious rituals. During these rituals, individuals could walk through hot infernos without any harm to themselves. In the field of parapsychology, there is extensive literature on these phenomena which describes members of particular communities (often perceived as "witches") and adepts of some cults who can walk unharmed over fire.

Gaddis [1] reported numerous cases of this type. A book by Kenn [2] described a study conducted by the University of Hawaii in which 576 individuals walked over burning coals more than 4.5 meters long. After this attempt, only 9 of them suffered minor burns. Thomson [3,4] described a ceremony called "Vilavilareivo," in which members of the clan "Tlankata" on Mbenga island of the Fiji archipelago were able to walk over burning coals due to their "power to influence fire."

According to Thomson, the Fiji firewalkers chose a ditch 19 feet long. At the beginning of the ceremony, large, burning-hot wooden stumps and large round hot stones were placed in the ditch, becoming a white-hot mass which emitted extremely intense heat. During the next part of the ceremony the participants levelled the surface and began to walk over it. A researcher came up to a stone, on which a clan member was walking, and touched it with a handkerchief. The kerchief instantly flamed and burned. However, after the ceremony the feet of the participants were perfectly normal. They also claimed that they could transfer their "fire-immunity" to others.

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Ocken [5] observed the same phenomenon on Fiji and gave more detailed information about firewalkers there. Gudgeon [6] observed similar phenomena at Baratonga island of the Cook archipelago and joined a firewalking ceremony himself, together with some of his European friends. Only one of them had a burn on his skin. Henry [7] also describes firewalking in Polynesia, in which some Europeans participated. Sayce [8] observed some episodes of fire-immunity in Natal and also emphasized that the ability can be conveyed to others. Roth [9] noted that during a firewalking ceremony the temperature of the stones was so high that the wooden sticks, which the participants used to level the stones became black from the heat. Fulton [10] observed firewalking during a "Vilavilareivo" ceremony on Fiji and attempted to explain the phenomenon of fire-immunity by specific physical properties of the stones used to prepare the place for firewalking. In Fulton's opinion, these stones possessed large thermal heat capacity but small heat emission.

Price [11] and Brown [12] conducted five experiments on the problem of fire-immunity, which were successfully replicated later. Kuda Bux, a Hindu studied by Price, could walk over hot coals with the temperature of 1,400° Fahrenheit.

In Italy, Cassoli [13] studied the problem of firewalking in Anastenarides, a Greek religious sect, the origin of which is lost in legends. Numerous researchers have studied firewalking performed by members of this sect as part of their typical religious ceremony [14-20].

Reports on fire-immunity in Greece, dated as early as 1257, describe events in the village of Kosti in northern Tracia. Once, a fire suddenly broke out in a small San Constantine church. While inhabitants of the village observed the flames gradually destroying the church, they heard strange sounds, as if people were crying. Since all of the villagers were present, they decided that these sounds were created by icons in the church. They concluded that the icons left in the flaming church had asked for help. Several villagers threw themselves into the flames, took out eight icons, and left the church without any burns.

These icons became the property of those who saved them. The legend states that from this time on, these individuals had the ability of fire-immunity, which was inherited from one generation to another.

Cassoli [13] has observed several episodes of fire-walking. He described a ceremony he witnessed as follows: A bed of red-hot coals 10-15 cm thick was spread on an 14 x 22 foot area. In the darkness, the coals glowed so brightly that one could see the faces of those who participated in the ceremony. I saw an individual kick off his shoes. . . Several others also took off their shoes and socks. Then I saw him walking with a very calm and rhythmic step, like dancing, on the coals. Seven steps were required to cross the surface covered by the coals. He was followed by a woman who stepped on the fire and her feet even plunged into the burning coals as they touched the external surface of her feet. She walked slowly, making six steps to cross the fire. Cassoli noted that it was possible to transfer this fire-immunity to the individuals who had observed the ceremony.

There is extensive literature on studies of these phenomena conducted by ethnographers and parapsychologists [21-27]. Firewalking was observed in religious ceremonies in Asia, Africa, Oceania, America, Indonesia, and Eastern Europe. Since during these ceremonies their participants acquired fire-immunity, some researchers found a certain similarity between firewalking and phenomena observed in the history of parapsychology, especially in the research of physical mediumship phenomena.

Everyone who has studied parapsychology is familiar with the capacities of Daniel Douglas Home, a famous medium of the last century, who demonstrated fire-handling: the ability to handle hot coals without any harm to himself. There were some reports that he also was able to transfer this ability to mediumistic seance participants [28-30]. For example, the biographer of the medium, described numerous documented cases of this type [31].

Despite numerous ethnographic and parapsychological evidence of the phenomena and the data of field research,

parapsychologists paid little attention to the study of fire-immunity. However, there exist some limited experimental data.

The most important aspect of this phenomenon can be formulated as follows: certain individuals possess immunity to the influence of such high temperatures which normally are detrimental for the human organism. It is well known that tissues of mammals cannot stand temperatures higher than 60° Centigrade; higher temperatures usually cause burns on the skin surface. However, in the case of fire-walkers no burns were observed. There exist three hypotheses to explain this phenomenon:

1. Firewalkers and mediums perform tricks unnoticed to observers.
2. The phenomenon is of "paranormal" causes.
3. Fire-immunity can be explained from the viewpoint of psychophysiology.

Let us analyze all the three assumptions. The author believes that the possibility of tricks can be ruled out. Among individuals who successfully performed firewalking there were not only "professionals" (e.g., shamans, members of esoteric, magical and religious sects), but ordinary individuals who participated in the ceremonies. There is a possibility that some individuals might do tricks, but this is not true for the majority of observations.

A "paranormal" explanation of firewalking is supported by a number of researchers. According to this assumption, individuals in the process of firewalking produce an influence of a psychokinetic type directed to the fire itself. We believe, however, that presently there are no research data to support such an assumption.

The possibility that fire-immunity is caused by natural psychophysiological factors is most frequently expressed. Numerous facts demonstrate that this assumption is reliable: Everyone possess a certain degree of moisture of the skin which gradually evaporates and protects the skin surface from burn, at least temporarily. There is also the fact emphasized by Frazer [32] that individuals who participate in these ceremonies have usually walked barefoot from their early childhood and have calluses on the soles of their feet which protect them during firewalking. Since these

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Individuals make only few quick steps on the fire, they do not get burned. This interpretation of the phenomenon is certainly quite limited. There were a number of Europeans who participated in similar ceremonies without harm to themselves. Furthermore, the fact that they walk quickly and make only a few steps is not sufficient to explain the lack of burns, given the extremely high temperatures involved.

A more plausible assumption is that participants of firewalking ceremonies are in trance-like altered states of consciousness which can be transferred from one individual to another. Therefore, perhaps, it is not the ability of fire-immunity that is transferred, but rather the trance-like altered state. This assumption would explain why the phenomenon of fire-immunity also occurred during mediumistic seances, in which the medium, who was in trance, could "transmit" his ability to other participants.

In his observations of firewalking in Anastenarides, Cassoli [13] emphasized the state of mystical exaltation in the participants of ritual fire dances on hot coals. Some studies also demonstrated a decrease of pain sensitivity in hypnotic trance (e.g. [13]). These observations suggest that the phenomenon of fire-immunity is related to a modification in the response of the human organism to intensive thermal stimuli in altered states of consciousness.

At present we do not possess sufficient experimental evidence for proper evaluation of the nature of the phenomenon of fire-immunity. At the same time, there are no empirical data which would confirm the existence of a kind of psi influence as the basis for fire-immunity.

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THE SOVIET PRESS REPORTS ON FIREWALKING

The following two reports are excerpts which appeared in two unrelated Soviet magazines: 1. Guberman's article, "Way Beyond the Horizon," in Nauka i Religiya (Science and Religion), No. 8, 1969; and "Fire Dancing" by the Bulgarian S. Slavchev in Tekhnika molodezhi (Technology for Youth), No. 1, 1971. Without presenting conclusive or profound evidence, both these articles give us insight into the point of view held in Soviet bloc countries about this phenomenon. - Ed.

Way Beyond the Horizon

Igor Guberman

The phenomenon of firewalking has been encountered in several countries of the world: India, Indonesia, Japan, the Polynesian Islands of the South Pacific and several African nations. Below I present a colorful account of the firewalking ritual as recounted by an eyewitness on the island of Bali:

"In a small open area stood an open white umbrella. This meant that a priest was present. Everything necessary for the ritual stood on a small table, particularly incense burners. Two young girls were already dressed in festive attire; the priest moved the intoxicating fumes of incense toward the girls, who began to breathe them in. They both began to go into a deeper and deeper trance state. The priest gave them fans and they, now in deep trance, began to perform a incredible dance with these fans. This was an unbelievable scene and we became somewhat frightened, since both girls had their eyes closed. Nonetheless their movements were completely in rhythm and harmony with each other. . . The girls rested a little without coming out of their strange state. Then they were given the fans again, and they resumed their dance. One of the attendants lit the fire and the girls began to dance around the fire with their eyes closed. We were literally numb with fear, afraid that